

CLAIMS

What is claimed is:

1. A method for storing object attribute data in a
5 database, the method comprising the steps of:
retrieving metadata from the database, wherein the
metadata indicates database limitations;
retrieving semantic information from a mapping
repository, wherein the semantic information indicates a
10 manner in which object attribute data is stored in the
database; and
storing object attribute data in the database
according to the semantic information and the metadata.
- 15 2. The method of claim 1 wherein the database
limitations are selected from a group comprising record
constraints, field constraints, and/or size limits.
3. The method of claim 1 further comprising:
20 storing the metadata using markup language to
identify the metadata.
4. The method of claim 1 wherein the semantic
information provides a mapping between object attributes
25 and records in a relational database.
5. The method of claim 1 further comprising:
storing the semantic information using markup
language to identify the semantic information.

6. The method of claim 1 further comprising:

determining whether or not the object attribute data has characteristics that conflict with the database limitations indicated within the retrieved metadata; and

5 in response to a determination that the object attribute data has characteristics that conflict with the database limitations, modifying the object attribute data so that the object attribute data does not have characteristics that conflict with the database
10 limitations.

7. The method of claim 1 comprising:

retrieving heuristic information; and

15 modifying the object attribute data in accordance with the heuristic information if the object attribute data has characteristics that conflict with the database limitations.

8. The method of claim 1 wherein the metadata and the
20 semantic information are retrieved during an initialization phase of an object model that uses the metadata on behalf of a client of the object model.

9. The method of claim 1 comprising:

retrieving heuristic information, wherein the heuristic information and the metadata are cached within an object model; and

5 modifying the object attribute data within the object model on behalf of a client in accordance with the heuristic information if the object attribute data has characteristics that conflict with the database limitations such that the modified object attribute data
10 can be stored into the database without error.

10. A method for storing object attribute data in a database, the method comprising the steps of:

retrieving metadata from the database, wherein the
15 metadata indicates database limitations;

retrieving semantic information from a mapping repository, wherein the semantic information indicates a manner in which object attribute data is stored in the database;

20 retrieving heuristic information, wherein the heuristic information and the metadata are cached within an object model;

modifying the object attribute data within the object model on behalf of a client in accordance with the
25 heuristic information if the object attribute data has characteristics that conflict with the database limitations; and

storing the modified object attribute data in the database.

11. An apparatus for storing object attribute data in a database, the apparatus comprising:

first retrieving means for retrieving metadata from the database, wherein the metadata indicates database limitations;

second retrieving means for retrieving semantic information from a mapping repository, wherein the semantic information indicates a manner in which object attribute data is stored in the database; and

storing means for storing object attribute data in the database according to the semantic information and the metadata.

12. The apparatus of claim 11 wherein the database limitations are selected from a group comprising record constraints, field constraints, and/or size limits.

13. The apparatus of claim 11 further comprising:
storing the metadata using markup language to identify the metadata.

14. The apparatus of claim 11 wherein the semantic information provides a mapping between object attributes and records in a relational database.

15. The apparatus of claim 11 further comprising:
storing the semantic information using markup language to identify the semantic information.

16. The apparatus of claim 11 further comprising:

determining means for determining whether or not the object attribute data has characteristics that conflict with the database limitations indicated within the

5 retrieved metadata; and

first modifying means for modifying, in response to a determination that the object attribute data has characteristics that conflict with the database limitations, the object attribute data so that the object attribute data does not have characteristics that conflict with the database limitations.

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17. The apparatus of claim 11 comprising:

15 third retrieving means for retrieving heuristic information; and

second modifying means for modifying the object attribute data in accordance with the heuristic information if the object attribute data has characteristics that conflict with the database limitations.

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18. The apparatus of claim 11 wherein the metadata and the semantic information are retrieved during an initialization phase of an object model that uses the metadata on behalf of a client of the object model.

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19. The apparatus of claim 11 comprising:

retrieving means for retrieving heuristic information, wherein the heuristic information and the metadata are cached within an object model; and

5 modifying means for modifying the object attribute data within the object model on behalf of a client in accordance with the heuristic information if the object attribute data has characteristics that conflict with the database limitations such that the modified object
10 attribute data can be stored into the database without error.

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20. A computer program product in a computer readable medium for use in a data processing system for storing object attribute data in a database, the computer program product comprising:

5 instructions for retrieving metadata from the database, wherein the metadata indicates database limitations;

instructions for retrieving semantic information from a mapping repository, wherein the semantic
10 information indicates a manner in which object attribute data is stored in the database; and

instructions for storing object attribute data in the database according to the semantic information and the metadata.

15

21. The computer program product of claim 20 wherein the database limitations are selected from a group comprising record constraints, field constraints, and/or size limits.

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22. The computer program product of claim 20 wherein the semantic information provides a mapping between object attributes and records in a relational database.

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23. The computer program product of claim 20 further comprising:

instructions for determining whether or not the object attribute data has characteristics that conflict with the database limitations indicated within the
30 retrieved metadata; and

instructions for modifying, in response to a determination that the object attribute data has

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characteristics that conflict with the database limitations, the object attribute data so that the object attribute data does not have characteristics that conflict with the database limitations.

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24. The computer program product of claim 20 comprising:
instructions for retrieving heuristic information;
and

instructions for modifying the object attribute data
10 in accordance with the heuristic information if the
object attribute data has characteristics that conflict
with the database limitations.

25. The computer program product of claim 20 wherein the
15 metadata and the semantic information are retrieved
during an initialization phase of an object model that
uses the metadata on behalf of a client of the object
model.

20 26. The computer program product of claim 20 comprising:
instructions for retrieving heuristic information,
wherein the heuristic information and the metadata are
cached within an object model; and

instructions for modifying the object attribute data
25 within the object model on behalf of a client in
accordance with the heuristic information if the object
attribute data has characteristics that conflict with the
database limitations such that the modified object
attribute data can be stored into the database without
30 error.

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27. A computer program product in a computer readable medium for use in a data processing system for storing object attribute data in a database, the computer program product comprising:

5 instructions for retrieving metadata from the database, wherein the metadata indicates database limitations;

 instructions for retrieving semantic information from a mapping repository, wherein the semantic
10 information indicates a manner in which object attribute data is stored in the database;

 instructions for retrieving heuristic information, wherein the heuristic information and the metadata are cached within an object model;

15 instructions for modifying the object attribute data within the object model on behalf of a client in accordance with the heuristic information if the object attribute data has characteristics that conflict with the database limitations; and

20 instructions for storing the modified object attribute data in the database.